

AMENDMENTS TO THE CLAIMS

1. (Original) A contaminated liquid mixing apparatus, comprising:

    a reactor head;

    a down tube extending from the reactor head and in fluid communication therewith; and

    a plurality of ports formed in the reactor head and configured to impart a spinning motion to a flow of liquid as it passes from the reactor head into the down tube, wherein each port is adapted to receive a flow restrictor to permit selective control of velocity and flow volume of a liquid through the down tube.

2. (Original) The apparatus of claim 1, including an inlet in the reactor head and a receiving chamber within the reactor head in fluid communication with the inlet and the plurality of ports.

3. (Original) The apparatus of claim 2, including a cartridge disposed within the receiving chamber defining the plurality of ports.

4. (Original) The apparatus of claim 3, wherein the cartridge comprises a plurality of facets, and wherein the plurality of ports are formed in at least one of the facets.

5. (Original) The apparatus of claim 4, wherein ports are formed in each facet of the cartridge.

6. (Original) The apparatus of claim 3, wherein the cartridge is removably disposed within the receiving chamber.

7. (Original) The apparatus of claim 3, wherein the reactor head includes means for accessing the receiving chamber and cartridge.

8. (Original) The apparatus of claim 7, wherein the accessing means comprises a removable lid.

9. (Original) The apparatus of claim 1, including a gas injection port formed in the reactor head.

10. (Original) The apparatus of claim 9, wherein the gas injection port is formed in a removable lid of the reactor head.

11. (Original) The apparatus of claim 1, wherein the flow restrictor comprises a removable flow restriction plug.

12. (Original) The apparatus of claim 11, wherein at least one flow restriction plug includes a liquid passageway.

13. (Original) A contaminated liquid mixing apparatus, comprising:

    a reactor head including an inlet and a receiving chamber in fluid communication with the inlet;

    a down tube extending from the reactor head and in fluid communication therewith;

a plurality of ports formed in the reactor head and in fluid communication with the receiving chamber, the ports being configured to impart a spinning motion to a flow of liquid as it passes from the reactor head into the down tube, wherein each port is adapted to receive a removable flow restrictor plug to permit selective control of velocity and flow volume of the liquid through the down tube.

14. (Original) The apparatus of claim 13, including a cartridge disposed within the receiving chamber defining a plurality of ports.

15. (Original) The apparatus of claim 14, wherein the cartridge comprises a plurality of facets, and wherein the plurality of ports are formed in at least one of the facets.

16. (Original) The apparatus of claim 14, wherein the cartridge is removably disposed within the receiving chamber.

17. (Currently Amended) The apparatus of claim 12 13, wherein the reactor head includes means for accessing the receiving chamber and cartridge.

18. (Original) The apparatus of claim 17, wherein the accessing means comprises a removable lid.

19. (Original) The apparatus of claim 13, including a gas injection port formed in the reactor head.

20. (Original) The apparatus of claim 13, wherein at least one flow restriction plug includes a liquid passageway.

21. (Original) A contaminated liquid mixing apparatus, comprising:

    a reactor head including a liquid inlet and a receiving chamber in fluid communication with the inlet;

    a gas injection port formed in the reactor head;

    a down tube extending from the reactor head and in fluid communication therewith;

    a cartridge disposed within the seating chamber having a plurality of ports in fluid communication with the receiving chamber, the ports being configured to impart a spinning motion to a flow of liquid as it passes from the reactor head into the down tube, wherein each port is adapted to receive a removable flow restriction plug to permit selective control of velocity and flow volume of the liquid to the down tube.

22. (Original) The apparatus of claim 21, wherein the cartridge comprises a plurality of facets, and wherein the plurality of ports are formed in at least one of the facets.

23. (Original) The apparatus of claim 21, wherein the cartridge is removably disposed within the receiving chamber.

24. (Original) The apparatus of claim 24, wherein the reactor head includes means for accessing the receiving chamber and cartridge.

25. (Original) The apparatus of claim 24, wherein the accessing means comprises a removable lid.

26. (Original) The apparatus of claim 21, wherein at least one flow restriction plug includes a liquid passageway.

27. (New) A contaminated liquid mixing apparatus, comprising:

a reactor head;

a down tube extending from the reactor head and in fluid communication therewith; and

a plurality of ports formed in the reactor head and configured to impart a spinning motion to a flow of liquid as it passes from the reactor head into the down tube, wherein each port is adapted with threads to receive a threaded flow restrictor to permit selective control of velocity and flow volume of a liquid through the down tube.

28. (New) A contaminated liquid mixing apparatus, comprising:

a reactor head;

a down tube extending from the reactor head and in fluid communication therewith;

a plurality of ports formed in the reactor head and configured to impart a spinning motion to a flow of liquid as it passes from the reactor head into the down tube, wherein each port is adapted to receive a flow restrictor to permit selective control of velocity and flow volume of a liquid through the down tube; and

at least one flow restrictor removably disposed within one of the plurality of ports.

29. (New) The apparatus of claim 28 wherein the plurality of ports are drilled and tapped so as to include threads, to thus allow the at least one flow restrictor to be threaded into one of the plurality of ports.